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ENVIRONMENTAL STUDY OF ERTS-1 IMAGERY

LAKE CHAMPLAIN BASIN AND VERMONT

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PRINCIPAL INVESTIGATOR: Dr. A. O. Lind

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Work Accomplished:

The first series of ERTS-1 imagery was received during the period and first-look analyses were conducted to establish whether or not the proposed objectives could be attained. These analyses were based largely on the original 9 X 9 inch positive transparencies and prints. The Spectral Data System's multispectral viewer was not delivered until the end of the reporting period, consequently, enhancement and subsequent analyses using this piece of equipment will be forthcoming in future reports.

The remote sensing laboratory now has most of the major equipment items, so that data analysis can now begin using those facilities.

Ground truth photography in selected study areas was continued within time frames dictated by ERTS-1 fly-overs.

A separate report describing significant results pertaining to the "first look" analysis will be forthcoming in approximately two weeks.

A topical summary of the "first-look" analysis is as follows: 91) Water-mass and lake characteristics from ERTS-1, RBV data; (2) Major land-use classes from RBV and MSS data; (3) Water resources evaluation from RBV data; and (4) Shore features interpretation from RBV data.

Since there was no MSS coverage of Lake Champlain for the date (30 July, 1972) showing the best view of the lake, only RBV images were used in analysis of lake features.

Active limnological data collection by the Lake Studies Center fleet continued during the period.

Planned Activity for Next Reporting Period:

It will be necessary to maintain ground truth investigations, but these will be narrowed in time to correspond as closely as possible to ERTS-1 fly-overs.

The Spectral Data, multispectral viewer, received at the end of this reporting period, will be pressed into service to provide image enhancements which will hopefully assist in the analysis of ERTS-1 imagery. It is anticipated that the viewer will be of greatest use in the lake studies area and land-use.

Results:

A separate report outlining significant results based on "first-look" analysis of positive transparencies and prints will be forthcoming in approximately two weeks. These results will focus on: (1) lake characteristics, (2) land-use, (3) water resources, and (4) shoreline interpretation.